



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,762	11/21/2003	Xin Ning	17,891	1449
23556	7590	03/31/2006	EXAMINER	
KIMBERLY-CLARK WORLDWIDE, INC.			DESAI, ANISH P	
401 NORTH LAKE STREET			ART UNIT	
NEENAH, WI 54956			PAPER NUMBER	

1771

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,762

Applicant(s)

NING, XIN

Examiner

Anish Desai

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The applicant's arguments in response to the Office action dated 08/12/05 have been fully considered.

1. The 35 USC Section 112 claim rejections are withdrawn.
2. The art rejection over Wu et al. (WO 02/42365) taken alone are withdrawn in view of the present amendments. The art rejection over Wu et al. (WO 02/42365) in view of Nakagawa et al. (US 5,308,663) are maintained.
3. The obviousness-type double patenting rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (WO 02/42365) in view of Nakagawa et al. (US 5,308,663) substantially as set forth in the 08/12/05 Office action.

Regarding claims 1 and 13, Wu teaches a biodegradable film permeable to moisture vapor and air but impermeable to liquid with moisture vapor transmission rates (MVTRs) of about 1000 to 4,500 grams per square meter per day (see Abstract). The examiner is equating the MVTRs of Wu as the claimed WVTR in the claims 1 and 13. With respect to claims 5 and 6, the film of Wu is formed by first melt blending

Art Unit: 1771

composition, which consists of about 40% to about 75% by weight of a biodegradable polymer such as aliphatic-aromatic copolyesters (Page 8, lines 20-23) and about 25% to about 60% by weight of inorganic filler such as calcium carbonate (Page 8, lines 9-13). Additionally, Wu teaches that it is known to provide biodegradable films with different polymer phases in the film so that when the film is stretched at ambient or room temperature, microvoids are produced to provide breathability and moisture vapor transmission (Page 8, lines 1-5).

With respect to claims 2 and 4, Wu teaches claimed invention except the machine direction stretch ratio as claimed in the claim 2 and the cross machine direction stretch ratio as claimed in the claim 4. Note that the stretch ratio is considered as a result effective variable. As the stretch ratio increases the Moisture Vapor Transmission Rate (MVTR) also increases. According to Wu, an incremental stretching force is applied to the film or the laminate to provide a film having a high MVTR and air permeability (Page 11, lines 2-5). Additionally, Wu teaches that film can be stretched in the cross direction and the machine direction (Page 12, lines 2-6). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to stretch the film to obtain the machine direction stretch ratio as claimed in the claim 2 and the cross machine direction stretch ration as claimed in the claim 4, because the discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claim 3, Wu teaches the composite or laminate can be incrementally stretched in the cross direction and in the machine direction (Page 12, lines 2-6). The

examiner is equating the cross direction and the machine direction stretching of the composite of Wu et al. as biaxial stretching.

Regarding claims 7 and 8, Wu et al. teach that the particle size of the inorganic filler is about 1 to about 10 microns (See claim 21).

Regarding claim 12, Wu et al. teach that the melt blending composition consists of about 40% to about 75% by weight of a biodegradable polymer and about 25% to about 60% by weight of inorganic filler such as calcium carbonate (Page 8, lines 9-13). The preferred melt blending composition consists of about 60% to about 75% of polyester such as aliphatic-copolyesters (Page 8, lines 20-23).

Regarding claims 14-16, Wu et al. teach that the film may be laminated with a nonwoven web (Page 7, lines 21-22) and that the microporous film or laminate is used in baby diapers, baby training pants and garments (Page 12, lines 6-11).

Wu is silent as to teaching of compatibilizer, compatibilizer is selected from the group consisting of fatty acids, fatty acids amides, silane compounds and alkyl titanates. However, Nakagawa teaches a biodegradable nonwoven fabric suitable to throwaway use (see Abstract) and throwaway fabrics such as diapers (Column 1, lines 15-17). The objective of the invention of Nakagawa et al. is to provide a biodegradable nonwoven fabric having sufficient strength, water resistance and moldability (Column 1, lines 54-56). Further Nakagawa teaches that it is possible to impregnate the biodegradable fabric with fatty acid to give water repellency to the fabric and control the decomposing period (Column 2, lines 65-68). The examiner is equating fatty acid of Nakagawa et al. as the claimed compatibilizer. Thus, it would have been obvious to one having ordinary

Art Unit: 1771

skill in the art at the time the invention was made to use the fatty acid of Nakagawa in the biodegradable film of Wu, motivated by the desire to form a water repellent biodegradable film and control the decomposing period of the film. With respect to claim 11, Wu as modified by Nakagawa teach claimed invention except the compatibilizer comprises from about 0.02 weight percent to about 2 weight percent of the film. Note that the amount of compatibilizer is considered as a result effective variable. As the amount of compatibilizer increases, the water repellency of the film also increases. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the amount of compatibilizer as claimed in the claim 11, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1,3,5,6,9,12, and 14-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8, and 10-20 of copending Application No. 10/718,973, substantially as set forth in the 08/12/05 Office action. The claims of the copending Application No. 10/718,973 fully encompass the claimed subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

6. Applicant's arguments filed 01/12/06 have been fully considered but they are not persuasive.
7. The 35 USC Section 112 claim rejections are withdrawn in view of the present amendments and response (see page 8 of 01/12/05 amendments).
8. The art rejections over Wu et al. (WO 02/42365) taken alone are moot in view of the present amendments (see pages 5 and 8 of 01/12/06 amendments) because Wu does not teach a compatibilizer.
9. The obviousness-type double patenting (ODP) rejections will not be withdrawn until the submission of the terminal disclaimer. Note that the claims should be rejected under the ODP over the claims of the copending Application No. 10/718,973 as shown above, rather than splitting them into two different rejections as shown in the 08/12/05 Office action.
10. The art rejections of Wu et al. (WO 02/42365) in view of Nakagawa et al. (US 5,308,663) are maintained for the following reasons.

The applicant argues that there is no proper motivation has been shown for why one skilled in the art would be motivated by the teachings of either Nakagawa et al. or Wu et al. or even by knowledge generally available to one such to add fatty acid of Nakagawa et al. to the films of Wu et al to make the films of Wu et al. water repellent as given in the Office action. In support, the applicant further argues that intact films by their very nature are already liquid barrier materials and their use is well known to one skilled in the art. Further the applicant argues that teachings of Nakagawa et al.

Art Unit: 1771

regarding impregnation of cellulose-based fibrous fabrics with fatty acid to give water repellency gives no motivation to impregnate fatty acids onto a film material because film materials are not water-absorbing cellulose based fibrous webs and have no need of externally added water repellents. The examiner respectfully disagrees. The invention of Wu et al. is directed to the use of inorganic fillers to provide biodegradable films having high air permeabilities and high MVTRs with liquid barrier properties (Page 8, lines 6-8). Thus, Wu et al. are concerned with obtaining biodegradable films with liquid barrier properties, which is contrary to the applicant's assertion that intact films by their very nature are already liquid barrier material. Further Nakagawa et al. clearly teach that it is also possible by impregnating, the biodegradable nonwoven fabric with a higher fatty acid such as stearic acid and palmitic acid to give water repellency to the fabric and control the decomposing period in the soil (Column 2, lines 65-68 and Column 3, line 1). Note that the examiner is not relying on Nakagawa et al. to teach the film because the primary reference of Wu et al. discloses the film. Further there is no teaching or suggestion in Nakagawa et al. that the fatty acids cannot be used with the film and Nakagawa et al. actually teach a film at Column 2, lines 32-35. Thus, Nakagawa et al. provides a motivation to one skilled in the art to use the fatty acids in the film of Wu et al., motivated by the desire to provide water repellency to the film of Wu et al. Additionally note that Nakagawa et al. teach that impregnating the fabric with the fatty acid controls the decomposing period of the fabric in the soil (Column 2, lines 65-68).

The applicant argues that Nakagawa et al. teach impregnating the fibrous nonwoven material with a fatty acid. Further the applicant argues that impregnation of one substance onto another material is an external process whereby the material is coated with impregnating substance. Coating of a fatty acid onto the outside of a film will not serve to act as a compatibilizer, which is an ingredient of the film's composition, but would rather result in a fatty-acid coated film. The examiner respectfully disagrees. As a matter of fact, Impregnating is not an external process as alleged by the applicant and is distinguished from coating only the exterior surface of the material. Impregnating involves the penetrating of the substance to be impregnated into both interior and exterior surfaces of the material. Therefore, impregnating the microporous film of Wu with a fatty acid forces the fatty acid into the interior surface of the film, which reads on the applicant's compatibilizer as an ingredient of the film's composition. Note that the claimed language calls for a biodegradable, breathable film comprising a compatibilizer. Nakagawa et al. teach of impregnating a nonwoven fabric with a fatty acid (Column 2, lines 65-66) to provide water repellency to the fabric. Thus, the fatty acid of Nakagawa et al. is impregnated into the interior surface of the fabric and provides water repellency to the fabric. Therefore, a skilled artisan would have found it obvious to add the fatty acid of Nakagawa et al. in the film of the Wu et al. in order to impart the water repellent properties to the microporous film because the fatty acid would be inside of the microporous film and provide water repellent properties. Accordingly the art rejections are maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anish Desai whose telephone number is 571-272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

APD

Hai Vo

**HAI VO
PRIMARY EXAMINER**